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ABSTRACT

To establish that measures of vocational identity are sensitive to variations in development, researchers need to demonstrate that different patterns of scores on these measures predict subsequent coping with later tasks of vocational development. This study investigated the ability of the Vocational Identity Scale (VIS) to predict coping with a subsequent vocational development task. A prospective longitudinal design was used with 121 students in an integrated program leading to a Bachelor's of Science and Doctor of Medicine (BS/MD) degree. Six groups of subjects were formed based on the degree of difficulty the students experienced in completing the BS/MD program. Analyses of variance and covariance, two post hoc analyses, and a discriminant analysis were conducted. Results indicate that mastery of the tasks of vocational identity crystallization and occupational choice specification, as operationally defined by the VIS, do not predict coping with the implementation task for a homogeneous sample of college students intent on entering medical school. Moreover, data raise the issue that the VIS may be insensitive to foreclosure in the vocational decision-making process. One table contains study data, and a 19-item list of references is included. (SLD)

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Predictive Validity of the Vocational Identity Scale

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Predictive Validity of the Vocational Identity Scale

Abstract

To establish that measures of vocational identity are sensitive to variations in development, researchers need to demonstrate that different patterns of scores on these measures predict subsequent coping with later tasks of vocational development. The present study investigated the ability of the Vocational Identity Scale (VIS) to predict coping with a subsequent vocational development task. The study used a prospective, longitudinal design with 121 students in a combined B.S./M.D. curriculum. The results indicated that mastery of the tasks of vocational identity crystallization and occupational choice specification, as operationally defined by the VIS, did not predict coping with the implementation task for a homogeneous sample of college students intent on entering medical school. Moreover, the data raised the issue that the VIS may be insensitive to foreclosure in the vocational decision-making process.

Predictive Validity of the Vocational Identity Scale

The central vocational development tasks of late adolescence and early adulthood involve forming a vocational identity and developing career choices. Counselors may use career development inventories to assess how individuals cope with society's expectation that they crystallize vocational goals and specify suitable occupational choices. A substantial literature about these inventories supports their content and concurrent validity (Savickas, 1990a). Unfortunately, only a few studies in this literature have addressed the predictive validity of career development inventories (Savickas, 1990b).

The lack of predictive validity studies causes a particularly critical problem for career development inventories that measure vocational identity and decision making. Concurrent evidence that indicates these measures validly assess identity formation and the decision-making process does not empirically demonstrate that this information portends anything about the individual's future career. Concurrent validity studies cannot determine whether these measures are specific for and sensitive to the dynamics of development. Studies to address this issue must investigate how scores on career development inventories relate to coping with subsequent career development tasks. Following the developmental model, one might assume that measures of vocational identity crystallization and career choice specification predict coping with the subsequent task of implementing a career choice.

The present study sought to test this assumption by investigating the ability of the Vocational Identity Scale (VIS) to predict coping with a developmental task that occurs late in the exploration stage, implementing a career choice. The VIS has performed very well in studies of its internal consistency and concurrent validity (Healy & Mourton, 1985; Holland, Gottfredson, & Power, 1980; Johnson, Johnston, & Kunce, 1985; Lucas, Gysbers, Buescher, & Heppner, 1988; Fuqua, Seaworth, & Newman, 1988). However, apparently only one published study has examined the predictive validity of the VIS. The results of this study (Healy, Tullier, & Mourton, 1990) indicated that the VIS did not predict follow through on enrollment plans for 278 men and 384 women who took the VIS along with academic achievement tests as a condition for entry to a community college. Among the participants who did enroll within ten months, the VIS did not predict their first-year grade point average. Two unpublished studies (described in Holland, 1991) concerning the predictive validity of the VIS found that it predicted attrition from college (Maryland Longitudinal Study Steering Committee, 1989, 1990) and correlated strongly with declaration of a major one month after completing a career course (Rayman & Bernard, 1987).

The present study used a prospective, longitudinal design to investigate the validity of the Vocational Identity Scale for predicting implementation of a vocational choice. It tested the hypothesis that scores on the VIS obtained earlier in the exploration stage predict success in coping with a subsequent task in the exploration stage.

Because the VIS has been shown to be sensitive to variations in identity formation and vocational decision-making difficulties, it scores indicate success in coping with the career development tasks of **crystallizing** field-and-level preferences and **specifying** an occupational choice. Therefore, higher VIS scores should predict success in coping with the next vocational development task, **implementing** a career choice. The implementation task essentially consists of converting an occupational choice into an actuality. This transition involves securing the necessary training and getting started in the specified occupation.

Methods

Measures

The Vocational Identity Scale (VIS) is the major component of My Vocational Situation (MVS; Holland, Daiger, & Power, 1980). Many counselors use the VIS separately because the two other parts of the MVS are problem checklists rather than psychometric inventories. The VIS measures the degree to which individuals possess a clear and stable picture of their goals, interests, personality, and talents. The authors derived the VIS from two earlier scales, the Vocational Decision Making Difficulty Scale (Holland, Gottfredson, & Nafziger, 1973) and the Identity Scale (Greenberger, Josselson, Knerr, & Knerr, 1975). Holland, Gottfredson, and Power (1980) concluded that these two antecedent scales use different item content to measure opposite poles of the same dimension. Holland, Daiger, and Power (1980) suggested that counselors

use the VIS to assess the degree to which a client needs vocational assistance. In taking the VIS, individuals respond either true or false to 18 questions. The total score is the number of items answered false.

In addition to the VIS, the following data were retrieved from the participants' academic records: high school grade point average (HSGPA), college grade point average (CGPA), Scholastic Aptitude Test score (SAT), American College Test score (ACT), Medical School Admission Test score (MCAT).

Participants

The students in the present study first responded to the VIS in 1983. The participants consisted of 143 students who were enrolled in the first two years of a 6-year integrated program that leads to both the bachelor of science (Phase I) and doctor of medicine (Phase II) degrees. The 83 male and 60 female students ranged in age from 17 to 20 with an average age of 19 years. The conditions under which they took the VIS and a description of the results may be found in a report published by Savickas (1985).

The participants seem particularly apt for a predictive validity study of the VIS because they shared the same occupational goal, physician. Uniformity of career choice controlled for the variance attributable to career aspirations which has been found to relate to the VIS (Holland, Gottfredson, & Power, 1980). Moreover, the students had just entered an accelerated baccalaureate curriculum to prepare for

entry into medical school. Thus, they were starting to deal with the implementation task. However, because they were enrolled in an accelerated program, some of these students may have been implementing before they had thoroughly mastered the crystallization and specification tasks. These two tasks are more typical concerns of 19 year-old college students. Therefore, it could be anticipated that this sample might include a significant portion of students who had foreclosed their decision making and committed themselves to a pseudocrystallized career choice. Accordingly, this sample of students who had all specified the same occupational choice might show greater than usual variation in stability of their choice. The longitudinal study was designed to determine if the VIS would be sensitive to this variation in development.

Procedures

The students' academic careers were followed for seven years to determine if they completed the 6-year program and if they encountered significant difficulties handling the program. Significant difficulties were operationally defined as an appearance before an academic review and promotion committee to discuss problems in their academic progress. This study did not differentiate whether the student's progress was stopped or delayed by academic or personal causes because these two causes are difficult to separate among students in accelerated training for the professions.

Results

Complete data were secured for 121 students. To examine the data, six groups were formed based on the degree of difficulty that they experienced in completing the combined BS/MD program. The first two groups consisted of students who withdrew from the program either during Phase I (N=21) or Phase II (N= 5). Three groups had significant problems at some point during their academic career yet they were able to continue in the program and eventually graduate. Some of these students faced problems only in Phase I (N = 17) or only in Phase 2 (N = 6) while other students encountered problems in both Phases of their training (N = 13). The sixth group consisted of students who had not encountered any significant problems and graduated on schedule (N = 59).

An analysis of variance that compared the six groups proved to be nonsignificant ($F = 1.25$, $df = 5, 115$; $p = .29$). No two groups differed from each other at the .05 level according to Scheffe procedures. Although the six groups did not differ significantly on the VIS, two trends are apparent in the data shown in Table 1. First, the two groups of students who withdrew from the program had the two highest mean scores on the VIS (14.1 and 15.8). Second, the groups were very similar on academic indicators collected at the end of high school (HSGPA, SAT, ACT) yet the groups differed on academic indicators at the end of Phase 1 of the program. For CGPA and MCAT, students who withdrew from the program (Groups 1 and 2) fell in the low range, students who had significant problems sometime during the program (Groups 3, 4, and 5)

fell in the middle range, and students who did not encounter significant problems during the program (Group 6) fell in the high range.

Insert Table 1 About Here

Two post hoc analyses were conducted to further examine possible differences in academic ability and achievement. An analysis of covariance was performed to determine if the six groups differed in VIS scores after controlling for academic ability and achievement as indicated by HSGPA and scores on the SAT and the MCAT. The results again showed no significant differences among the six groups ($F = .943$, $df = 5, 77$; $p = .46$).

A discriminant analysis was conducted to determine if the VIS moderates the predictive efficiency of the standard indicators of academic success (HSGPA, ACT, and SAT) at the point of high school graduation. Based on their performance during the program, the six groups were collapsed into three groups: withdrew (Groups 1 and 2), problems (Groups 3, 4, and 5), and no problems (Group 6). The academic indicators (HSGPA, ACT, SAT) were included in the model, then the VIS was entered to determine if it added anything to the prediction of group membership beyond the academic indicators. It did not ($F = .91$). A discriminant function using the academic indicators was significant. Thus the VIS does not add significantly to the predictive power of the

standard academic indicators in classifying the students into groups based on academic success.

Discussion

The results of the present study whould be interpreted with several limitations in mind. Certainly the results are limited to some degree by the small number of participants and by the criterion of predictive validity. More importantly, however, the meaning of the results must be interpreted in light of the great homogeneity of participants. In designing the study, I thought that the participants' homogeneity would control for occupational choice. Moreover, I wanted to determine if the VIS could be useful as a noncognitive predictor of success in a medical school curriculum. In retrospect, the homogeneity of participants may have provided a severely circumsribed test of the VIS's predictive validity, especially because this homogeneity was at the high end on every measure.

With these limitations in mind, I concluded that for students in accelerated training for the professions the VIS may not relate to subsequent patterns of academic performance, stability of occupational choice, and success in coping with the implementation task. This conclusion is disappointing because the VIS seemed to have the potential to predict which students might encounter difficulty in training for the professions. Admissions committees and counselors at professional schools have been frustrated for many years in their attempts to identify a measure that could be useful in selecting students and

offering preventitive interventions. Given the great homogeneity in student ability and academic achievement, the measure must be noncognitive. Unfortunately, the results of the present study suggest that the VIS, which had been a good candidate for a noncognitve measure that could predict professional school outcomes, may not be valid for this purpose.

The data set of the present study contains the hint that the VIS, and by logical extension other measures of the career choice process, may be insensitive to the problem of pseudocrystallized career choice. Maybe students who foreclose the vocational decision-making process without thorough occupational exploration and adequate individuation from their parents obtain high scores on the VIS. Follow-up research is underway, using more heterogeneous participants, to examine if the VIS and other similar measures such as the Career Decision Scale can distinguish mature commitment from premature foreclosure in vocational decision making. If these measures are insensitive to foreclosure as a developmental status, then counselors may need to exercise extreme caution in basing interventions on scores from measures of vocational identity and vocational decision-making difficulties.

References

Fretz, B. R., & Leong, T. L. (1982). Career development status as a predictor of career intervention outcomes. Journal of Counseling Psychology, 29(4), 388-393.

Fuqua, D. R., Seaworth, T. B, & Newman, J. L. (1988). Relation of state and trait anxiety to different components of career indecision. Journal of Counseling Psychology, 35, 154-158.

Greenberger, E., Josselson, R. Knerr, C., & Knerr, B. (1975). The measurement and structure of psychosocial maturity. Journal of Youth and Adolescence, 4, 127-143.

Healy, C. C., & Mourton, D. (1985). Congruence and vocational identity: Outcomes of career counseling with persuasive power. Journal of Counseling Psychology, 32, 441-444.

Healy, C. C., Tullier, M., & Mourton, D. (1990). My Vocational Situation: Its relation to concurrent career and future academic benchmarks. Measurement and Evaluation in Counseling and Development, 23, 100-107.

Heppner, P. P., & Krieshok, T. S. (1983). An applied investigation of problem-solving appraisal, vocational identity and career service requests utilization, and subsequent evaluations. The Vocational Guidance Quarterly, 32, 240-249.

Hoffman, M. A., Spokane, A. R., & Magoon, T. M. (1981). Effects of feedback mode on counseling outcomes using the Strong Campbell

Interest Inventory. Does the counselor really matter? Journal of Counseling Psychology, 28, 119-125.

Holland, J. L. (1991, August). The Vocational Identity Scale: A diagnostic and treatment tool. In W. B. Walsh (Chair), Career assessment into practice. Symposium conducted at the meeting of the American Psychological Association, San Francisco.

Holland, J. L., Daiger, D. C., & Power, P. G. (1980). My Vocational Situation: Description of an experimental diagnostic form for the selection of vocational assistance. Palo Alto, CA: Consulting Psychologists Press.

Holland, J. L., Gottfredson, D. C., & Power, P. G. (1980). Some diagnostic scales for research in decision making and personality: Identity, information, and barriers. Journal of Personality and Social Psychology, 39, 1191-1200.

Holland, J., Gottfredson, G., & Nafziger, D. (1973). A diagnostic scheme for specifying vocational assistance (Rep. No. 164). Baltimore: Johns Hopkins University, Center for Social Organization of Schools.

Johnson, S. K., Johnston, J. A., Kunce, J. (1985). Validity of My Vocational Situation for homemakers and displaced homemakers. Measurement and Evaluation in Counseling and Development, 18, 17-25.

Lucas, E. B., Gysbers, N. C., Buescher, K. L., & Heppner, P. P. (1988). My Vocational Situation: Normative, psychometric, and comparative

data. Measurement and Evaluation in Counseling and Development, 20, 162-170.

Maryland Longitudinal Study Steering Committee. (1989). Career development and its academic correlates (Research Report No. 12). College Park: University of Maryland, Division of Student Affairs.

Maryland Longitudinal Study Steering Committee. (1990). The Black student experience (Research Report No. 15). College Park: University of Maryland, Division of Student Affairs.

Rayman, J., & Bernard, C. (1987). Strong and weak vocational identities: A post mortem of a career course. (Research Report No. 14). University Park, PA: Pennsylvania State University, Career Development and Placement Services.

Savickas, M. (1985). Identity in vocational development. Journal of Vocational Behavior, 27, 329-337.

Savickas, M. (1990a). The use of career choice measures in counseling practice. In E. Watkins, & V. Campbell (Eds.) Testing in counseling practice (pp. 373-417). Hillsdale, NJ: Lawrence Earlbaum Associates.

Savickas, M. (1990b, July). Predictive validity criteria for career development measures. In K. Seifert (Chair), Criteria for the validation of measures of career development. Symposium conducted at the 22nd International Congress of Applied Psychology, Kyoto, Japan.

Table 1

Mean Scores on Measures for Six Groups

	Groups*													
	Group 1		Group 2		Group 3		Group 4		Group 5		Group 6		Total	
Measure**	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
VIS*	14.10	3.10	15.80	2.19	12.59	3.84	13.92	3.55	12.16	1.94	13.56	2.91	13.58	3.12
HSGPA	3.87	.12	3.78	.25	3.82	.14	3.91	.10	3.92	.07	3.90	.14	3.88	.14
CGPA	2.84	.57	3.01	.35	3.20	.29	3.19	.34	3.51	.28	3.62	.23	3.35	.45
SAT	1147	131	1140	151	1125	115	1133	121	1258	110	1206	100	1178	111
MCAT	7.67	1.54	7.23	1.52	8.19	1.34	8.13	.93	8.72	.92	9.27	1.31	8.69	1.44
ACT	26.25	2.71	27.85	1.21	28.06	1.55	28.08	2.36	28.83	2.56	28.80	2.05	28.36	2.15

* Group 1 (N-21) - withdrew before Phase 1; Group 2 (N-5) - withdrew during Phase 2; Group 3 (N-17) - significant problems in Phase 1 only; Group 4 (N-13) - significant problems in Phase 1 and Phase 2; Group 5 (N-6) - significant problems in Phase 2 only; Group 6 (N-59) - no significant problems.

** Measures: VIS - Vocational Identity Scale; HSGPA - High school grade point average; CGPA - College grade point average; SAT - Scholastic Aptitude Test; MCAT - Medical College Admissions Test; ACT - American College Test.